

## CLAIMS

What is Claimed is:

- 5    1. A method for sharing programming objects between computers comprising:  
      creating a context having a unique identifier;  
      receiving a request from a second computer to join a context with a first  
      computer;  
      determining if the second computer has permission to join the context; and  
10      sending a message comprising context data to the second computer if the first  
      computer has permission.
- 15      2. The method of Claim 1, wherein receiving a request from a second computer to  
      join a context further comprises receiving a request from a second computer that  
      comprises a server.
- 20      3. The method of Claim 1, wherein receiving a request from a second computer to  
      join a context further comprises receiving a request from a second computer that  
      comprises a client of a server and wherein the server is associated only with the  
      second computer and not the first computer.
- 25      4. The method of Claim 1, wherein receiving a request from a second computer to  
      join a context further comprises receiving a request from a second computer that is  
      part of a computer network that includes the first computer.
- 30      5. The method of Claim 1, wherein sending a message comprising context data to the  
      second computer further comprises sending information relating to one of a chat  
      room, a word processing program, a spreadsheet program, a slide presentation  
      program, and a gaming program.
- 30      6. The method of Claim 1, wherein sending a message comprising context data to the  
      second computer further comprises sending information relating to a real-time  
      collaboration.

7. The method of Claim 1, wherein receiving a request from a second computer to join a context further comprises receiving a request from a second computer comprising a hand held computer and wherein the first computer comprises one of a desk top and lap top.

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8. The method of Claim 1, further comprising generating the message with a full ordered packet.

9. The method of Claim 1, further comprising generating the message with a full  
10 ordered packet that comprises the context data and a list of last packet numbers from  
one or more nodes that are part of the context.

10. The method of Claim 1, further comprising:

receiving packets with the second computer; and  
15 determining when the packets received with the second computer were created  
relative to the context data.

11. A system for supporting real time collaboration computer applications comprising:

an application program for receiving input and for providing output that is shared between computers;

5        a system network object for supporting function calls made by the application program and that is accessible by other computers across a network; and

a transport abstraction layer for establishing and maintaining communications between system network objects distributed across the network, irrespective of whether the system network objects reside on server computers and non-server  
10 computers.

12. The system of Claim 11, wherein the transport abstraction layer comprises a set of interfaces.

15      13. The system of Claim 11, wherein the system network object is part of a context.

14. The system of Claim 13, wherein the context comprises information that tracks one or relationships between multiple system network objects and relationships between computers that may have one of copies of the objects and access to the  
20 objects.

15. The system of Claim 11, wherein the application program comprises one of chat room application, a word processing program, a spreadsheet program, a slide presentation program, and a gaming program.

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16. The system of Claim 11, wherein the application program comprises a real time collaboration program.

17. The system of Claim 11, wherein the computers across the network comprise at  
30 least one computer server and at least one peer-to-peer network.

18. The system of Claim 11, wherein the computers across the network are part of a peer-to-peer network.